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GROW: Using Artificial Intelligence to Screen Human Intelligence

Masahiro Fukuhara, founder and CEO of Tokyo-based people analytics startup Institution for a Global Society (IGS), took a break from poring over data to question how it could best be used. In the seven years since Fukuhara had founded IGS, its solution for evaluating job candidates – “GROW” – had grown quickly, and the wide range of ways clients used it both excited and concerned him.

GROW, an iOS and Android app (**Exhibit 1**), consisted of two proprietary components: a competency assessment and a personality assessment. To assess competencies, GROW employed a peer-feedback tool to reveal 25 specific competencies that IGS had chosen based on extensive social science research (**Exhibit 2**). To assess personality, GROW employed a gamified version of the Implicit-Association Test (IAT), an established assessment of hidden bias in social psychology, that individuals could play on mobile devices (**Exhibit 3**). While neither component was particularly novel, what GROW did with them was: it used artificial intelligence (AI) learning algorithms to analyze every speck of assessment data from both the candidates and the evaluators, looking for patterns to improve its ability to accurately screen candidates over time (**Exhibit 4**). In place of human “intuition,” GROW used “big data” – disparate data points across many people – to develop a scientific, objective, and constantly improving engine to recruit, screen, and develop human capital.

So far, it seemed to work. For example, in a test of GROW, one client had both its HR professionals and GROW evaluate the same 200 students. GROW not only surfaced nearly the same top 50 candidates (the two lists were statistically indistinguishable), but more importantly, it did so with specific data-based and competency-based justifications.

As of June 2017, GROW had 74,000 users, including students at both prestigious and lesser-known universities. Clients included Mitsubishi Corporation, All Nippon Airways (ANA), Septeni, DeNA, Rakuten, AXA, and many others. Even government entities like Japan’s Ministry of Economy, Trade, & Industry (METI) and the United Arab Emirates were getting involved.

The widespread interest in GROW was both an opportunity and a challenge. On the one hand, it provided Fukuhara with a growing base of users, data, and institutional support. On the other hand, Fukuhara wondered if he should play a stronger role in strategically focusing the use of GROW where it was likely to have the most meaningful (and least potentially misleading) impact.

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A Short History of IGS

Before starting IGS, Fukuhara was a managing director at asset management firm Barclays Global Investors (BGI) where he made investment decisions based on computer-driven models (see **Exhibit 5** for Fukuhara's work history). The mantra at BGI was "quantify everything," and it instilled Fukuhara with the belief that quantitative judgment would result in greater risk-adjusted returns. As Fukuhara moved up in the organization, he spent less time managing the data and more time managing people, and he began to ponder, *why not quantify personal capabilities as well?* Like investors making asset management decisions, he noted that people can fail to objectively (and perhaps quantitatively) assess themselves and others. Could the advantages of quantitative (quant) investing be applied to evaluating and developing people? Following Black Rock's acquisition of BGI, and sensing an opportunity to pursue his curiosities for himself, Fukuhara left the firm and founded an educational venture, IGS.

At first, Fukuhara ran IGS as a small private cram school in a bustling part of Tokyo. Doing so provided him with a chance to observe firsthand how young people grow, how they respond to feedback, and how they learn to assess their own skills. An avid reader of philosophy educated in both Japan and abroad, Fukuhara designed a novel curriculum of philosophy, critical thinking, debate, and English as a Second Language (ESL) which drew interest not just from parents and students in Japan but also from schools and governments for which Fukuhara consulted. Through those conversations, and thinking back to his own experiences with 360-degree feedback at INSEAD and BGI, Fukuhara felt increasingly confident that people's behaviors could change for the better through more frequent feedback—once or twice a month rather than once or twice a year. Yet drawing on his Japanese roots, he knew that exchanging honest feedback was uncomfortable for many Japanese, making it an uncommon event. To Fukuhara, the hiring process was a missed opportunity to collect, use, and exchange such feedback in a systematic way—and was a juncture when individuals were likely to act on it.

Once again Fukuhara saw a connection to his former work. At BGI, during his years as an FX and global fixed-income researcher, he developed early deep learning and other advanced statistical methods to support the quant investment platform. He sought to build a similarly scalable technology for feedback during the hiring process. In early 2015 Fukuhara began holding weekly brainstorming sessions with former colleagues, friends, and researchers to flesh out a tool that would *both* help students understand their strengths and weaknesses *and* assist HR in hiring. As a nod toward the desire to help students grow, the tool was named GROW. With marketing support from Asahi Shimbun, one of Japan's most prominent media companies, as well as funds earned by spinning off IGS's education arm, Fukuhara turned to focusing IGS on developing the two-sided GROW platform.

GROW

Through focus groups with student users and countless meetings with executives at various firms and institutions, IGS's agile team developed GROW as a gamified mobile consumer app that allowed students to "gift" each other feedback on various competencies and discover their personality traits through a modified Implicit-Association Test (IAT). Needing companies to join the platform, IGS added a B2B2C strategy and began providing GROW to HR functions in organizations. Early clients included mostly tech/manufacturing companies like DeNA and Calsonic Kansei, though clients used the service in various ways—to identify star players in their firms, to assess those who had already received job offers to join their firms (potentially to place them in certain roles), or to ascertain which subset of the 25 competencies were strategically critical yet consistently underrepresented in employees' test results.

In need of more cash to improve the technology, increase client acquisition, and expand the user base (grassroots efforts signed up just a few hundred), Fukuhara embarked on meetings with venture capitalists (VCs) and, by summer 2017, secured a \$6 million Series A round with capital from the University of Tokyo Edge Capital, the Tokyo University of Science Investment Management Company, and the Keio Innovation Initiative. These investments made IGS the first and only venture in Japan funded exclusively by university VCs, which Fukuhara viewed as a testament to GROW's dual purpose for students and companies.

After closing the Series A financing, IGS focused on client acquisition by aggressively targeting HR decision-makers at prominent firms and demonstrating IGS's technical capacity to do complex data analyses on companies' human resources processes. More client contracts with major Japanese firms and a media-friendly story (job hunting frustration could be added to death and taxes as unpleasant certainties in Japanese society) helped GROW increase its users from 2,000 in December 2016 to 74,000 by June 2017, a small but meaningful share of Japan's annual university graduates (roughly 650,000).

How GROW Works

Once a user created a GROW account and completed an in-app tutorial (**Exhibit 1**), she or he could evaluate the competencies of another user (classmate, coworker, acquaintance, etc.), complete a self-evaluation, or complete the IAT. IGS used its AI algorithms to analyze the resulting data, from both candidates and evaluators, in order to develop and customize HR-related services for clients and users.

Competencies

To power GROW's AI engine (see **Exhibit 4** for an overview of how it worked), IGS first developed a list of competencies and associated queries that met several specific criteria (**Exhibit 2**). Given the many ways a competency could be defined, each competency was initially approached through six or seven questions (called "queries"). However, to increase the chances that evaluators would complete the assessment, IGS then used principal component analysis to reduce the number of queries down to the most relevant and least redundant three. (See an example in **Table 1**.)

Table 1 Competencies Are Defined through Three Queries

Competency:	<i>Creativity</i>
Query 1:	<i>S/he does not merely imitate others when doing a task – s/he tries to add her/his own value.</i>
Query 2:	<i>S/he is good at coming up with ideas no one else has thought of.</i>
Query 3:	<i>S/he can combine existing ideas to create something new.</i>

Evaluators were asked to answer each query through a four-level rubric, preventing a neutral response. Generally, the four levels indicated whether the candidate (1) rarely, (2) sometimes, (3) frequently, or (4) nearly always exhibited the actions or traits of each query (**Exhibit 2**), but the rubrics also contained specific details to help evaluators accurately distinguish among the levels (**Table 2**).

Table 2 Competencies Are Evaluated through a Four-Level Rubric

Competency:	<i>Creativity (with regard to Query 1 above)</i>
Rubric 1:	<i>S/he merely imitates others when doing a task.</i>
Rubric 2:	<i>Once in a while, s/he will do something different.</i>
Rubric 3:	<i>S/he has the right attitude to do things in a way that adds her/his own value.</i>
Rubric 4:	<i>By doing things in her/his own way, s/he actually adds her/his own value.</i>

Weighting

Users received ratings from multiple evaluators (four to five, on average, in addition to the self-evaluation), but each evaluation was not weighted equally. Instead, GROW employed a patent-pending, probabilistic (Bayesian) machine learning (AI) algorithm that used data on how that competency had been evaluated historically (called “priors”), along with many data points about an evaluator to determine the posterior likelihood that such an evaluation was genuine and calibrated to reality (**Exhibit 4**). For example, every query-rubric pair had its own data on the amount of time it historically took users to complete that evaluation (from reading the query and rubrics to making the assessment). So if an evaluator answered much faster than most, that might lead the algorithm to decrease the weight of his evaluation. Similarly, if an evaluator gave more diverse ratings over time—some 1’s, 2’s, 3’s, and 4’s—she might be deemed more discerning and therefore much more reliable than an evaluator who gave all 3’s. The algorithm also took into account an evaluator’s IAT results, as certain personality tendencies (such as conscientiousness) often led to more reliable evaluations. Another key data point was the social graph of the evaluator: an evaluator that gave evaluations for multiple users in various social networks was typically more reliable than an evaluator who only joined the app to give evaluations to a particular user.

Personality Traits

The Implicit-Association Test was a well-known test in social psychology to reveal attributes and biases people have, and the test had been connected to personality traits. In GROW, users progressed through a series of implicit association tasks in which they dragged certain attributes, appearing at the bottom of the screen, to the box containing the correct attribute (for example, talkative to extroverted) (**Exhibit 3**). The box containing the correct attribute was either juxtaposed or matched with a concept (myself, others), and the manner in which the user swiped the moveable attribute was assessed to predict the personality traits of the user. GROW’s patented mobile IAT used unsupervised machine learning to reveal anomalies in patterns of swiping behavior and thus better predict personality.

How Organizations Use GROW

After numerous rounds of testing, IGS was ready to provide GROW as a software-as-a-service (SAAS) tool for interested firms. There was overwhelming interest. With the advent of online resume submission, digital outreach, and apps designed to help students apply effortlessly to many potential employers, applications were skyrocketing: the average undergraduate in Japan was sending 50–100 resumes, or “Entry Sheets” (ES), to companies during job hunting season. But even as companies were flooded with applications, their approach to processing those applications had not changed much—they still relied heavily on laborious resume screening and several time-consuming rounds of face-to-face interviews. As a result, they simply could not keep up, and the quality of their new hires were suffering as result. GROW presented a very attractive solution, although as firms adopted it, it became clear that firms were using the tool in different, interesting, and even unexpected ways.

Septeni Holdings

Septeni Holdings (Septeni) was founded in 1990 to develop a human resource consulting business at the height of bubble-era Japan. After the bubble burst, Septeni shifted its focus to internet advertising just as the internet was taking off. In 2017, Septeni was one of the largest internet marketing companies in Japan, and it had grown by adopting unique approaches to recruit and cultivate the best entrepreneurial talent who could then effectively grow subsidiaries and therefore revenues.

To screen talent, Septeni had traditionally followed the common Japanese approach of inviting university students to its offices in Tokyo to participate in multiple rounds of group interviews, in which groups of applicants would be monitored as they completed teamwork-based tasks that simulated typical work at Septeni. But that approach had significant drawbacks for Septeni, including the need for students to visit Septeni in person (which largely excluded students living outside the Tokyo area), the need for students to be sufficiently aware of and interested in Septeni as a potential employer (to invest the time and money¹ to join the group interviews, which they did not always do since Septeni was a mid-sized company), and the need for students to perform exceptionally well in the one-shot group interviews, since that was the only chance Septeni had to assess them before making a hiring decision.

To address the first issue, Septeni had created a new online hiring process, composed of one video interview plus a web-based inquiry, for students living outside the Tokyo area who could therefore opt out of paying expensive travel costs for the interview. That, however, left Septeni without the data it had traditionally collected through the in-person group interviews. Septeni turned to GROW as a substitute for that data. By collecting evaluations from peers throughout a student's time at university, GROW fit well with Septeni's internal evaluation criteria, which was focused on personality traits and on capabilities that an individual demonstrated as she or he worked with others over time.

In 2016, Septeni provided IGS with data on prior-year candidates and interview outcomes to help IGS "train" the AI algorithm, from which IGS developed a supervised machine learning algorithm to accurately predict which candidates—past and future—would pass Septeni's group interviews. Early results with GROW during the 2017 recruiting season were promising. Not only did GROW's predictions closely match the outcomes of Septeni's internal evaluations, but it doubled the talent Septeni sourced from outside Tokyo, made potentially obsolete the group interview process, and increased Septeni's name recognition among students (since GROW's other clients included well-known firms in Japan). The final outcome: a 90% reduction of the overall processing effort while Septeni's year-over-year acceptance rate of its job offers jumped four-fold, all with no apparent impact on candidate quality.

All Nippon Airways

Japan's largest airline, All Nippon Airways (ANA), was consistently rated among the most popular companies in the eyes of students seeking jobs after graduation. To build its pipeline of future senior leaders, ANA sought to identify promising students by screening the tremendous number of applications they received every year. With only a limited number of HR staff, however, ANA feared it would miss needles in the haystack—students with the potential to be future leaders but who were screened out too early in the recruiting process.

First, IGS worked with ANA to prioritize 10 competencies it would highly value in its new recruits. Students interested in ANA then used the GROW app to have their competencies and personality traits assessed, which was used to create a "total score." Based on all of the other data IGS collected about a student and her evaluators, GROW's AI engine also produced a "confidence score" to rate the degree of confidence IGS had in that total score. ANA then plotted each applicant on a single graph, with "total score" on the x-axis, "confidence score" on the y-axis, and the color of the dot representing how far into the screening process the candidate progressed (application received, invited to first round, invited to second round, invited to third round, finalist, and received job offer) (see **Figure 1**).

¹ In Japan, it was common for companies to hold interview days at their headquarters and expect all interested candidates to show up in person at their own expense.

Figure 1 ANA Can Use GROW to Interview Promising Candidates It Would Have Screened Out

Source: ANA company documents.

The data revealed several insights:

1. ANA could use GROW to screen out candidates who were unlikely to make it to a final interview, as candidates with a less than -4 confidence score and less than -5 total score were extremely unlikely to become a “green dot”;
2. The clustering of green dots in the upper right of the graph lent confidence to the use of GROW as a tool for ANA’s HR staff; and
3. There were many students who did not make it past the application screening and yet could not be distinguished from final round interviewees using GROW.

To investigate the third insight further, ANA invited around 423 students who had high GROW scores to interview along with the candidates who passed using the traditional process. To ANA’s surprise, some of the invited GROW students received perfect scores in the interviews, leading HR to realize that by using GROW data in a supervised machine learning manner, GROW could help surface promising candidates who ANA would have otherwise missed.

As a result, rather than focusing on screening students out, ANA decided to use GROW to screen students in, further developing and fine-tuning its inclusion criteria. With these parameters, ANA could use GROW to more accurately target clusters of students with high potential to advance through the recruitment process.

Mitsubishi Corporation

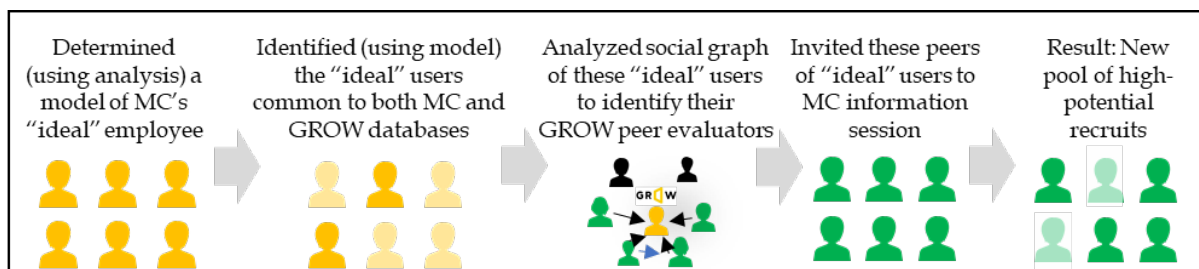
One of Japan’s largest and most storied enterprises, Mitsubishi Corporation (MC) operated businesses in diverse industries, including industrial finance, metals, machinery, chemicals, new energy, infrastructure, finance, technology, daily living essentials, and more. In 2017, MC’s activities extended far beyond its traditional trading model to include active participation in the management of its businesses. While the firm historically had few issues attracting Japan’s best and brightest graduates (it was often number one in popularity among new graduates), the evolution of its business model had

increased its need for highly capable managerial talent. Interested in increasing its pool of such candidates, MC began discussions with IGS to use GROW.

To assist MC in sourcing new candidates for its applicant pool, IGS first worked with MC to create within GROW an algorithmic model for the “ideal” MC employee. IGS and MC then ran the algorithm on candidates already registered in MC’s application database who were also among the GROW users who had completed GROW’s competency and disposition screening. Based on a hypothesis that peers of “ideal” candidates might also be “ideal” (birds of a feather flock together), IGS created a social graph of the “ideal” candidates, identifying those individuals who were among the five or more peers who had given the “ideal” candidates feedback (see **Figure 2**). IGS then passed this information along to MC, which used the social graph to identify those peers who had not registered in MC’s hiring database. MC decided to invite these peers of “ideal” candidates to an information session about MC.

Fifty potential candidates attended this session. Interestingly, many of them already had job offers from top companies such as Google and Goldman Sachs. Yet by speaking with current employees and getting to know more about MC, a number of them not only applied to MC after the session, but eventually decided to join MC after passing the interviews. To MC, GROW’s greatest value was as a tool to help discover talented applicants who had not discovered them.

Figure 2 Using the Social Graph of Mitsubishi Corporation’s (MC’s) Candidates

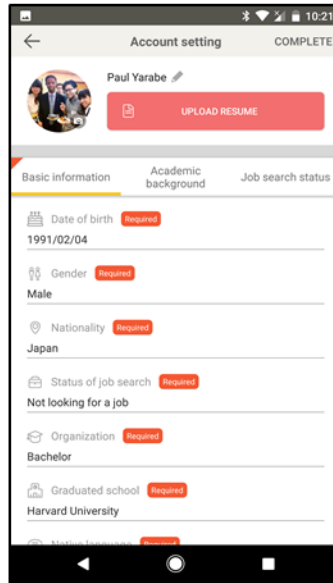
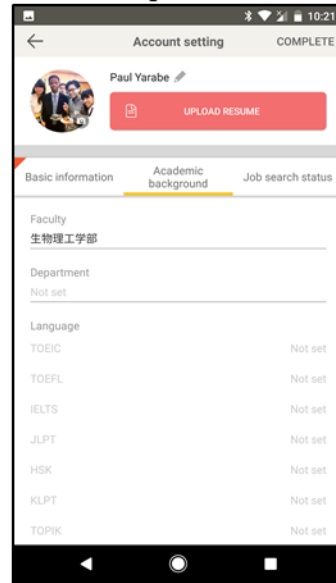
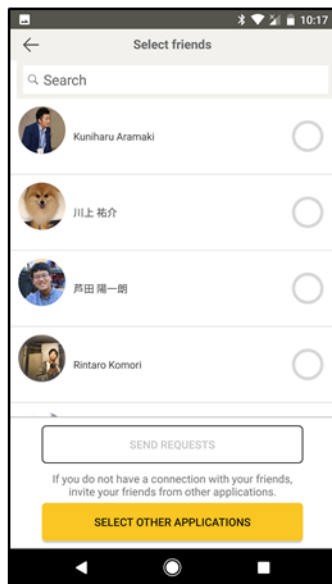
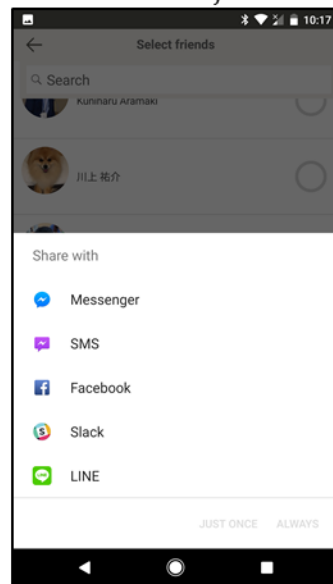
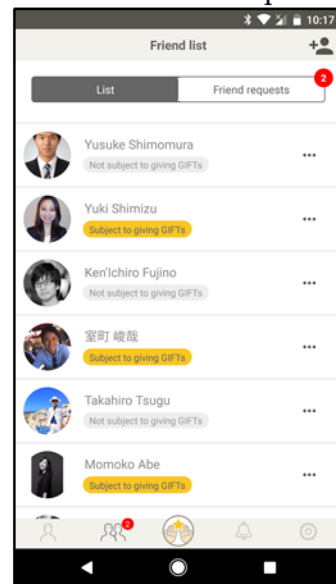


Source: Casewriter.

GROWing Forward

With more client data on how GROW’s recommended hires were performing, and more applicant data (IAT and peer competency ratings) from an increasing number of users, GROW’s AI was poised to deliver ever more robust hiring recommendations to clients. But as Fukuhara’s AI became smarter, what about his human clients? Was it time to educate them about the best ways to use GROW? If so, which of the ways his clients were using GROW were likely to be better (and less potentially misleading)?

Fukuhara also cautiously saw potential to expand GROW’s capabilities. As IGS collected data not only on current recruits but on the performance of previously recommended hires, GROW’s AI had the potential to improve both the hiring process and the hiring criteria. Was it time to turn on the “reinforcement machine learning” AI (**Exhibit 4**) such that the AI would be able to overrule some of the client-defined characteristics of an “ideal” candidate that had not worked well in the past, based on how hired individuals ultimately performed at work? In short, could Fukuhara’s AI become smarter than his clients? And how would his clients feel about such a proposition and the ceding of control it would require? Fukuhara wondered about the best ways for GROW to grow.

Exhibit 1 Using Grow**1. Download App
(iOS or Android)****2. Complete Basic Profile
Information****3. Complete Academic
Profile, Upload Resume****4. Find friends already on
GROW****5. Invite friends not on
GROW to join****6. Make or respond to
friends' feedback requests**

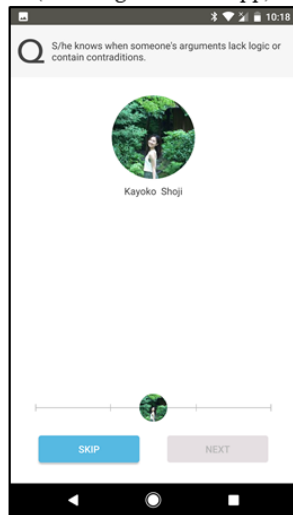
Source: IGS company documents.

Exhibit 2 Competency Evaluation in GROW

Each competency was selected from hundreds of competencies and skills reported in social sciences literature based on several criteria: 1) Representation across different countries and cultures; 2) Correlation to success in relevant job functions (as verified by executive search firms); and 3) Assessable by peers. The winnowing down of competencies was done by Dr. Mitsuru Kimura of the University of Tokyo. An excerpt of each competency, translated from Japanese, follows:

1	problem setting	Understand a situation to find out the problem and cause
2	solution oriented	Be able to make a plan to solve the problem and actually achieve results
3	ability to get things done	Be able to deal with any kind of task
4	creativity	Be able to suggest one's own idea
5	logical thinking	Be able to think deeply
6	doubt what is said to be true	Not just agree with other people's opinions but make counteroffer
7	inner values	Be able to judge the situation by one's inner values
8	vision	Be able to have a clear future goal
9	self-efficacy	Self-confident and can handle any kind of task
10	growth	Can cope with difficult problems to improve oneself
11	interests	Be able to gather information in any field
12	resilience	Be able to manage difficult situations
13	control of one's emotions	Be able to withstand stress in any situation
14	ability to express oneself	Be able to explain to other people and help them understand easily
15	empathy and listening skills	Listen eagerly and try to understand what the person is saying
16	extroversion	Put oneself in any environment
17	flexibility	Handle tasks by improving ways to proceed
18	decisiveness	Be able to decide a matter by checking one's own idea and objective facts
19	open-minded	Be able to accept people who have different ideas and opinions
20	ability to wield influence	Be able to influence people by telling one's opinion
21	passion, evangelize	Be able to make people understand by telling one's opinion
22	teamwork	Be able to create a positive atmosphere to improve teamwork
23	global mindset	Be able to act as a member of a global team
24	commitment to a team	Be able to work hard for the goals of a team to achieve the team's goals
25	sense of ethics	Encourage people to do the right thing

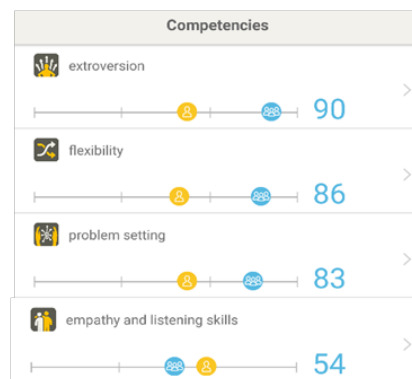
Users are asked a question about a friend who requested feedback (called "gifts" in the app)



As users respond on the four-point scale, the app describes level of competency



When a sufficient number of "gifts" are complete, the feedback recipient can compare their self-assessments (in blue) with their peer assessments (in orange) and get tips on how they can improve

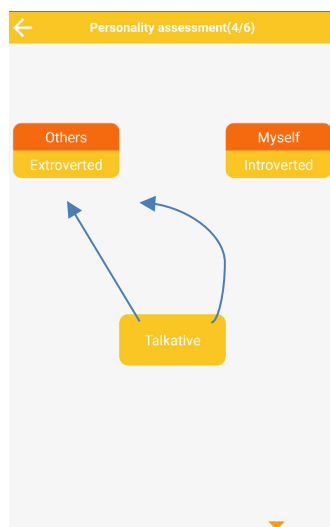


Source: IGS company documents.

Exhibit 3 Implicit-Association Test (IAT), GROW's Personality Assessment

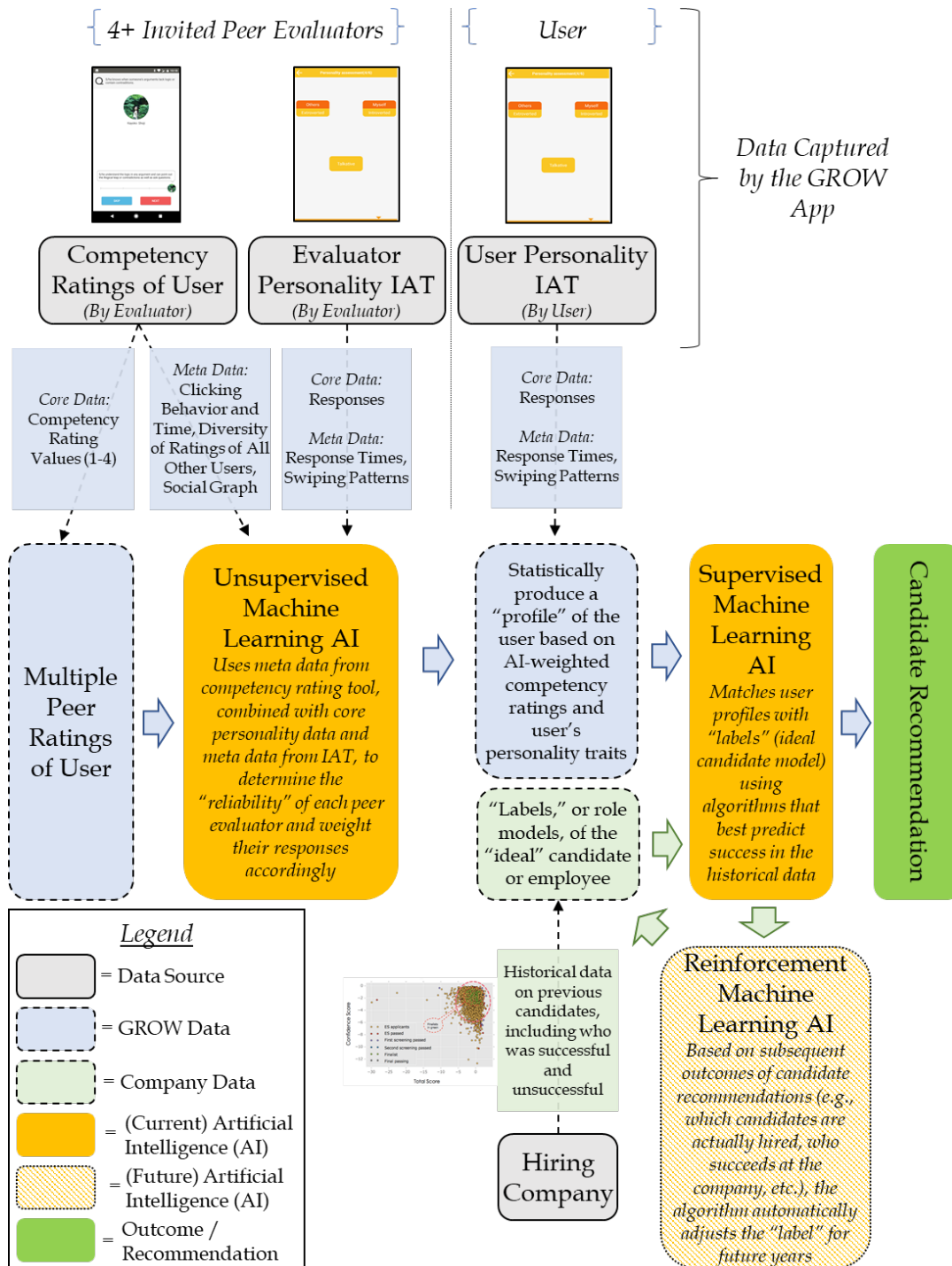
The following are based on the Big Five personality traits, developed independently by several groups of researchers in the 20th century.

1	Extroverted	You are proactive, dynamic, action-oriented, and always looking for external stimulation through interaction. On the other hand, your actions can be unreasonable.
	Introverted	You are reserved and prefer a stable environment. You do not look for external stimulation and find stability within yourself. On the other hand, you can be a coward and can be slow in taking actions.
2	Open	You try to obtain new information and expand your knowledge base and experience. On the other hand, you can be unrealistic and can have idealistic ideas.
	Conservative	You are content with the current situation and grounded. On the other hand, you do not like changes and tend to stick with authority and traditions.
3	Sensitive	You can be sensitive to risk and tend to avoid risks by being prudent. On the other hand, you can get very nervous and emotionally unstable when placed in a stressful environment.
	Calm	You are not influenced by risk and are always emotionally stable. On the other hand, you are insensitive to other peoples' feelings or environment.
4	Cooperative	You are a good listener, can understand others, and create cooperative relationships. On the other hand, you tend to think of others too much and tend to be a follower. Therefore, the cooperative person can lack leadership and can tend to be a shrinking violet within the group.
	Independent	You can have a strong character, have the ability to generate original and new ideas, and lead a group. On the other hand, you have a tendency to be selfish and too competitive.
5	Hard working	You have a strong will and make efforts to achieve a goal every day. On the other hand, you can be a perfectionist and can frustrate yourself and others.
	Laid back	You accept who you are and the environment and are flexible. On the other hand, you can lose your way and can make careless judgments.



In an example of GROW's customized, mobile-friendly test, concepts of self and others (in orange) are randomly paired with personality traits (in yellow). The user is asked to swipe the moveable yellow box (labeled Talkative in this example) at the bottom of the screen to the correct attribute (extroverted). Someone who considers themselves extroverted may hesitate when associating "others" with being more talkative. This "hesitation" is tracked and analyzed in two ways – in the pattern of the swipe (straight to the left, or in a curved fashion) and in the time tracker (at the bottom of the screen). Established priors can then help determine the posterior likelihood of a user's personality type.

Source: IGS company documents.

Exhibit 4 How the Artificial Intelligence in GROW Works

Source: Casewriter.

Exhibit 5 Masahiro Fukuhara's CV**Employment**

2010 (May)-present: CEO/Founder of Institution for a Global Society K.K. (IGS)

Founded IGS for analyzing people and teams for HR and Education.

2000–2010 (April): Managing Director of Barclays Global Investors (now BlackRock)

Created data-driven forecasting models for one of the largest global macro hedge funds led by Richard Grinold and Richard Meese (former professors at UC Berkeley Haas School of Business).

Proposed data-driven venture capital investment by analyzing people and management teams of ventures (rejected by the team).

1992–2000: Portfolio Manager of Bank of Tokyo-Mitsubishi (now MUFG)

Created a data-driven forecasting model for currency hedging by using neuro artificial intelligence model.

Proposed the launch of global macro hedge funds (rejected by the team).

Education

2005: Ph.D. from Tsukuba University

Wrote various papers in global journals about crowd herding in global currency market using extreme value and graph theory.

1999: Master's in International Finance from HEC (with highest honors)

Concentration on stochastic movement and its control.

1997: MBA from INSEAD

Most influenced by the experience of 360-degree evaluation in a HR course.

1992: Undergrad from Economics Department at Keio University

Major: Statistics and Econometrics

Source: IGS company documents.

GROW: Using Artificial Intelligence to Screen Human Intelligence

Analysis & Presentation

1. ให้นิสิตอธิบายวิธีการพัฒนาเครื่องมือ GROW วิธีการดังกล่าวสามารถทำให้ GROW เป็นเครื่องมือในการประเมินสมรรถนะและบุคลิกภาพผู้สมัครได้ดีมากน้อยเพียงใด และมีอคติจากข้อมูลนำเข้าและอคติในกระบวนการวิเคราะห์หรือไม่ อย่างไร
2. นิสิตคิดว่าเครื่องมือ GROW ที่มีการจัดการด้วยระบบ AI ในการให้น้ำหนักคะแนนในการประมวลผลมีปัญหาด้านจริยธรรมข้อมูลและละเมิดสิทธิด้านข้อมูลของผู้ให้ข้อมูลหรือไม่ อย่างไร
3. กรณีศึกษาทั้ง 3 บริษัท ได้แก่ SH, ANA และ MC นำ GROW นำเครื่องมือ GROW มาใช้ในกระบวนการคัดเลือกพนักงานได้อย่างเหมาะสมหรือไม่ อย่างไร นิสิตคิดว่าบริษัทที่สนใจใช้เครื่องมือ GROW ควรมีแนวทางในการใช้งานเครื่องมืออย่างไรจึงจะเพิ่มความแม่นยำและลดความผิดพลาดด้านการประมวลผลที่อาจเกิดขึ้นได้เป็นอย่างดี
4. นิสิตคิดว่าบริษัทควรยกเลิกการประเมินแบบ paper and pencil แล้วมาใช้ในการประเมินผ่าน App ดังเช่นระบบ gamification mobile app ของ GROW หรือไม่ อย่างไร อธิบาย
5. นิสิตคิดว่าจะพบข้อจำกัดของเครื่องมือด้านใดบ้างหากบริษัทขยายธุรกิจเปิดตลาดการใช้เครื่องมือ GROW เพื่อการคัดเลือกบุคลากรในประเทศไทย
6. เมื่อระบบมีฐานข้อมูลที่ใช้ขึ้นเรื่อย ๆ นิสิตคิดว่า IGS ควรหรือไม่ควรอนุญาตให้ AI ปฏิเสธการใช้เกณฑ์หรือคุณลักษณะต่าง ๆ ที่ลูกค้าระบุว่าเป็นผู้สมัครในอุดมคติ หรือที่ใน Exhibit 4 ระบุไว้ ฟังก์ชัน “reinforcement machine learning” AI พร้อมวิเคราะห์ผลกระทบที่อาจเกิดขึ้นกับธุรกิจและมุมมองของลูกค้าต่อการใช้เครื่องมือ GROW